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Marvin E. Bailey
Vice President
State Technology Programs

May 20, 1996

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D. C. 20554

RE: **Ex Parte Statement**
Docket 96-45

Dear Mr. Caton:

The attached letter was sent to Ira Fishman, Special Counsel, Federal Communications Commission on May 20, 1996 and should be included in the record of the above referenced proceeding.

Sincerely,

Attachment

cc: Ira Fishman

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May 20, 1996

Ira Fishman
Special Counsel
Federal Communications Commission
1919 M Street, N.W., Suite 614
Washington, D.C. 20554

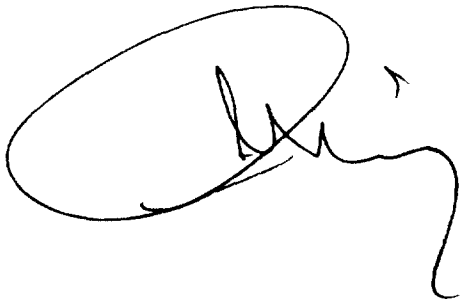
Dear Ira,

As we discussed, attached are two summaries relating to the educational and library provisions of Docket 96-45, Universal Service.

The first item is a listing of categorical issues presented by the major provisions of Docket 96-45. The second item is selected summaries of various commentors during the first round of comments on the NPRM.

Thank you for your consideration.

Sincerely,



Categorical Issues Presented by Major Provisions in Docket 96-45

Discounts

1.) Most Frequent or Most Significant Proposals:

- TS-LRIC, discount to
  - LRIC floor
  - 105% of LRIC (/Texas)

- end-user credits
  - $/student
  - $/student according to need
  - $/school building

- 95% subscription rate-affordability price
  - use competitive bids or national median benchmark rate; discount to the 95% subscription rate price, recompense to TS-LRIC

- simple discounts - (45% - 50% - 75% suggested)
  - from market price
  - from standardized, indexed price
  - must be higher than LRIC

- sliding scale discounts according to use in education
  - 100% for basic
  - 5-10% for advanced
  - must be less than amounts charged to others for similar services

- direct subsidies for rural, insular, high cost locations

- free services
  - toll-free dial-up to ISP
  - core services

- deepest volume discount for similar services to commercial customers

- convert from business to residence rates

- benchmark pricing
  - benchmark national median prices (where there is competition), then apply discount
  - determine price which permits 95% of user community to afford service
  - USF compensation is from 95% affordability price to carriers TS-LRIC
  - discount is applied from winning bid price to 95% affordability price

- fixed dollar discount/per service

2.) Other Discount Proposals:

- free services, (other)
  - 56 KB access per school, library
  - one phone line per school (USDLA)
  - one satellite receiver w/circuitry (USDLA)
  - eliminate inter-office facility charges
  - Internet access

- draw from single fixed amount fund
  - states allocated fair share to discount from

- do nothing
- do nothing, use competitive bids

- do not discount core telcom services
- discount only core telcom services

- advanced services should not be eligible

- use existing discount methods for low income customers (Lifeline); assume schools, libraries are low income customers;
  - discount as 10% below lifeline, or
  - 20% below lowest rates offered to businesses

- discount rates in declining amounts in direct proportion to their ability to pay; proxy for ability to pay is rate of poverty

- discount long distance rates to be no more than the price of a local call

- libraries need range of discounted rates; discount might be made based on population of libraries local service area, level of per capita support provided to public library, or the total operating income of other types of libraries

3.) Special Pricing Needs

- need for flat rate pricing

- need for additional discounts to urban inner city locations
  - lowest 20% - 25% of all districts
  - all districts with 15% of children in poverty (Title 1 funding)
  - proportional lifeline discount to variance from national median

- price should be lesser of:
  - present day rate or current bid
  - lowest price charged for similar services to other parties
  - market based price discount to assure affordability

- require unbundling of technology

- discounted mileage charges; free interoffice facilities

- discount should be distance insensitive; also consider principles of universal service, utility of usage in schools, libraries, degree to which cost is a barrier to service acquisition

4.) Discounts - General Issues

- difficult to administer in future when tariffs are not filed

- competitive bidding - who is eligible, who participates in funding; with these issues - structure as competitively neutral
  - many non-competitive locations - LEC of last resort

- Size of Fund
  - Funding possibilities
    - additional tax on interstate services
    - state additions (legislature)
  - % of USF fund (10% suggested)
  - Kickstart models

- Is there an issue of conflict with existing state discount programs? service provider program? can/should both discounts apply?

- Do discounts apply only to new services or to existing base? How do you prevent arbitrage of disconnect/reconnect if discount is only to new services?

- Concern for harmonizing discounts between federal/state programs - states must fund their requirements beyond defined federal program

- Eligibility for discounts beyond Act, should it include?
  - community colleges
  - universities

- early childhood development centers (for profit and not-for-profit)
- distance learning consortia
- vocational - technical
- museums
- cultural institutions
- public television stations/consortia
- community information networks
- cooperative library networks

- If not flat-rate pricing, must we discount access only or access and use? Telcom Act and Conference Report may differ in their suggestions.

- Aggregating market demand: Is there an issue here that should be addressed?

- Will elimination of lata boundaries help with discounted pricing?

- One commenter recommends no discount recovery from USF except in rural high cost locations which should also receive further discounts

- Some states which have already discounted services may be placing providers in double-jeopardy by applying federal discount on top of state discount; carriers may not be able to justify.

- Discount Programs: Can we inventory and learn from existing state, vendor programs?
  - Pacific Telesis - California: Education First
  - Southwestern Bell (SBC) in Texas (105% of LRIC), Oklahoma, Missouri
  - Bell Atlantic - now developing program
  - SNET
  - Ameritech
  - New York
  - Maine
  - Wisconsin

- Illinois
- Louisiana
- West Virginia
- Other?

- State vs. federal control: If price is offered as lower of state or federal discounts, and the state discount is largest, it incents greater recovery from the USF. On the other hand, we seek the lowest possible price for education.

- Flat-rate pricing mentioned as a must by many commenters. Is this doable for all services? in particular, ISDN, broadband data?

Services:

1.) Most Frequent or most significant comments:

- all telcom services eligible for discount
- all available telcom services eligible for a discount

- leave definition of services needed to
  - individual states
  - individual schools

- define in terms of functionalities, do not specify technologies
  - voice grade connectivity
  - high speed data transport (56KB to T1)
  - broadband (advanced)

- rely on market forces to determine

- broadband should receive (no, minimal, substantial) discounts

2.) List of Proposed services eligible for discounts:

- Core services:
  - voice grade access
  - toll-free dial-up to Internet

- Most frequently listed special services:
  - high speed dedicated access to Internet (56KB, 128KB, T1)
  - toll-free dial-up to Internet
  - ISDN, fractional T1, T1 access for two-way interactive distance learning (video)
  - access to information services
    - e-mail
  - internal networks; wiring, wireless

- Other special services mentioned:
  - local, long distance transport for voice data
  - unbundled broadband switching / transport
  - broadband transport (T3, OC3, SONET)
  - voice mail
  - multiplexing of services
  - video on demand
  - terminal equipment for special needs students

- Most frequently proposed technology types
  - ATM
  - frame relay
  - ADSL
  - optional SS7 / blocking
  - cellular, wireless
  - satellite

- Other suggestions:
  - pilot program to determine eligible services

3.) <u>Services Comments, Issues:</u>

- should there be minimum standards for each school that should be monitored?

- should/how to include Internet Service Provider services in discount process?

- educators request more significance be given to dedicated access to Internet, development of two-way interactive video; dial-up is a transitional need

- rural areas need access to services equal in function and price to urban areas

4.) Comments, Issues on Broadband, Advanced Services

- can incent through regulatory reform; need inventory of what each state is doing; is more required by the FCC?

- incentives might range from direct financial assistance to accelerating licensing

- discounts on advanced services (broadband) inflates size of USF requirement. It could shift demand from cable companies to incumbent LEC's. (competitively-neutral?)

- where no company provides broadband access, it should be awarded to low-bidder in competitive process; Is this recoverable from the USF fund? Should advanced services have discounts recoverable from the fund?

- cable has made a significant broadband investment for schools, libraries; are we artificially inducing unnecessary costs? are we discouraging new market entrants?

- many suggest that broadband need is just beginning, but rapidly growing; comments range from "must be defined as a universal service" to "marketplace decisions."

- other proposals for advanced services funding:
  - in-service training needs
  - set-aside USF funds for R&D, demonstration projects
  - set-aside USF funds for product development grants
  - extra incentives for broadband deployment in empowerment zones

- broadband should receive (no / minimal / substantial) discounts. Which is it?
  - should states have the right to discount advanced/broadband services while FCC discounts basic, special

- should broadband / connectivity to advanced services be required on an "as requested" basis?

- do we need incentives for full digitization of the network? for broadband in the last mile?

- some states waive special construction, installation charges to incent broadband. Texas has unique 105% of LRIC, interoffice facilities @ statewide average distance insensitive basis; what incentives are doable?

5.) Wiring Comments, Issues :

- cost of wiring to every classroom
  - over what time frame is it accomplished?
  - other options for funding?

- wireless is an acceptable alternative

- wiring is a deregulated service; how can discounts, incentives be specified?

- how can wiring be funded from the USF if the providers are local retail vendors or wireless providers who don't pay support to the fund?

- can special incentives (advanced telcom services) be used under section 706, 707 to craft measures to stimulate wired schools? NetDays?

Sharing, Resale Issues:

- much sharing of facilities already occurs; best example is Internet access from schools to post-secondary hubs; access is partitioned; does the Act disincent existing arrangements? should it?

- sharing for distance learning: content is very often provided by ineligible providers; are we disincenting key relationships?

- many wish to charge cost-recovery fees for occasional users or consumers for occasional access; does resale prohibition prevent cost-recovery?

- should sharing, resale be prohibited at all if the primary purpose of the service is educational?

- some schools are implementing sharing arrangements on dial-up access with student homes and also teachers, parents; are special exemptions needed?

- sharing is the most economical alternative; can pricing be partitioned?

- the worst impact of this requirement is on rural, high cost areas

General Issues:

- highest order issue is vision, holistic treatment of all needs to make technology effective; how to integrate the connectivity and wiring elements with the professional development needs; hardware, CPE needs; content, curriculum needs; how to fund all of the above?

- size of the USF fund?
  - use Kickstart lab model?
  - "taxed" parties want predictability
  - end-users want no limits on the size of the fund

- in some locations, cable companies are providing voice, data, video telecommunications services to schools; are they included in the USF fund?

- should ESPs, ISPs contribute to the USF? Is this double-billing?

- should minimal service platforms (and/or discounts) be phased in over time?

- should Internet access be classified as Interstate?

- many made reference to the Telcom Act being overly ambiguous with many definition problems (Note Syracuse comments)
  - also libraries insist there is a definitional problem with eligible "libraries"

- What is the relationship to the Telecommunications Development Fund? Can it be leveraged?

- What barriers prevent carriers from voluntarily supporting universal service goals in the form of grants, gifts, service discounts?

- who resolves disputes?

- Is the Iowa Communications Network to be considered a telecommunications carrier eligible to receive reimbursement for the discounts it provides? How do they pay into the fund? Others?

- many services which are considered special, but not advanced are not ubiquitously deployed, e.g., voice mail, ISDN. Must the provider of last resort make the capital investment? How are they recompensed for investments they cannot hope to recover?
  - same issue for broadband services, switching?

- the statute provides that the carrier is obligated to provide any of its services that are within the definition of universal service at a discount; the statute does not give the Commission the authority to require the provision of services that are not already offered. The statute also suggests that the list of services must be carrier services, i.e., regulated, basic (TCI).

CC Docket 96-45
Universal Service
Education, Library Services - Selected Summaries

RBOC's, other telcos

NYNEX
- user credits; leaves services definitions to individual schools needs; discounts difficult to administer in future when tariffs not filed; allows competitive bidding for services; allows state to vary discount/student (or credit/student) according to need.
- Issue: State Authority to develop rules for how the discount varies. Appendix uses varying percentages.
- appendix on how NYNEX Education Plan works and the financials. Issue: Problem is inside wire funding req't.

Pacific Telesis
- likes concept of funding $ per student or per school; suggests minimum standards; touts their 5 ISDN lines per school, free for one year; usage flat-rated after first year: need for flat rate pricing among discount options
- suggests, for advanced services , schools must show proof of purchase of CPE, training
- suggests state definition of what schools, libraries need.
- different funding mechanisms required for requirements other than access and connections within schools
- suggest discounts should not apply to basic POTS access: Centrex or 1MB service because of costs
- concern that states may have different services which meet USF criteria and that should effect levels of funding provided to each state. Reason that's why $ per student is required; states could supplement to cover services beyond federal definition.
- suggests industry workshops to resolve issues

Bell South
- schools and libraries at different points in ability to effectively utilize; must match to specific needs in timely fashion
- define in terms of functionalities, not specific services: functionalities should include:
  - voice grade connectivity (data to 28.8kb)
  - transport up to T1 levels
  - anything beyond is advanced and should be covered under Section 706
- simple discount is possible, however...
- alternate plan allocates $ per school, library to obtain services it most needs: cafeteria-style; allows for certainty of pool requirements
- suggests discount be accompanied by state-administered certification process that hardware exists, software, CPE, training, curriculum, financial resources; would have USF as one component

Southwestern Bell
- already underway; must complement, not overlap, duplicate
- note Attachment 3, much going on in their states; note Texas as 105% of LRSIC; several other examples

GTE
- states allocated a fair share to make discounts from
- Kickstart cost info in Appendix

Bell Atlantic
- says it is developing cooperative federal-state-local proposal to ensure schools have tools for access

US West
- wants modest proposal
- each school should be provided with a 56/64KB access line and toll-free dial-up access to an Internet Service Provider; carriers should be free to choose most cost-effective technology to provide service.

Ameritech
- wants accounting tracking between core and advanced services
- services: variety, e.g., access to Internet, distance learning networks, NII, DS1, video, cable learning channels; avoid defining services, communities, marketplace should decide
- suggests simple discounts from base price
- wants periodic survey to measure progress, learn why schools are not subscribing

United States Telephone Assn (USTA)
- holistic treatment of many requirements is needed; no one entity can be responsible for all resources required; universal service funds should be used for telcom services only; all level of government and various industries must cooperate to address
- FCC should require schools and libraries to develop a comprehensive plan to address funding, ongoing support of all seven components
- FCC should establish size of fund using KickStart lab model cost estimate as amount to be distributed to institutions; Joint Board and FCC must work with educators to determine how to equitably distribute; allows schools to best address their unique needs and tailor to their circumstances.
- act does not require discounts for access to advanced telcom services

Southern New England
- states at varying points; may best be managed as state initiative; have already made state commitments

Cincinnati Bell
- state not federal matter; only core services as defined by traditional universal services proceedings should qualify for discounts

Frontier
- narrowly target support
- may benefit from modem access to classroom; absent compelling definition of need, other services should not apply
- discount: recovery from single fixed amount fund

Century Telephone
- if reimbursed from fund, they agree to participate

Associated Communications and Research Services
(for several rural telcos)
- need separate identifiable fund
- fund should be limited to providing assistance in rural area only
- advanced services requires substantial investments; must have opportunity to recover these costs without wholly burdening ratepayers

Interexchange Carriers:

AT&T:
- discounts should apply only to telecommunications services, not CPE or inside wire upgrades
- discounts should be capped at deepest volume discount offered for similar services to commercial users
- carriers are also entitled to receive funds from USF for special discounts

MCI
- should adopt pilot program to determine services needed paid for from existing USF fund
- need to assess demand curve; discount down to capital recovery (includes maintenance and returns), do not include joint and common recovery

Sprint
- services and discounts are premature; do nothing

LDDS
- suggests that ESP's providing on-line access should contribute to USF

America's Carriers Telcom Assn
- laudable intent will produce unforeseen tensions; doesn't offer much

CAPs

Teleport
- difficult to discuss, asses issues; should delay to assess needs
- states should designate lists of services

MFS
- important to note that discount applies only to universal services; schools and libraries already have affordable access to and use of universal service functionalities
- example: Internet access: dial-up is $25 local line and $20 month subscription; cost is de minimus compared to $3000 computer; discounting $25 local line will have no impact.
- advanced services have enhanced access because of competition; just need more competition

ESPs

Netscape
- not really an ESP
- should not impose universal service contribution reqts on ESP's
- should not have separate definitions for education, will change quickly as industry matures
- all Internet communications should be classified as interstate, preempt state regulation
- if dedicated circuits are interstate under ten per cent rule, Internet must be interstate
- should use advanced telcom incentives under Sections 706, 707 to craft special measures to stimulate "wired" schools, enhance development; 706-707 not limited to price support mechanisms

- can incent advanced telcom through regulatory reform and by removing barriers to infrastructure investment; can use range of measures from direct financial assistance to accelerating licensing to build out broadband incentives
- Telecommunications Development Fund: use auction revenues

Commercial Internet Exchange Association
- do not subject Internet access to universal service charges; will distort and hinder innovation
- nature of Internet access is different from telephony; no way to distinguish local from interexchange traffic

Interactive Services Assn
- Act prohibits FCC from including those who provide on-line and Internet access services as group who must contribute to USF
- On-line services and Internet Access Service are not telecommunications services; meet none of the tests to be defined as a telcom service; Congress did not intend for these services to be clasified a such; Coommission must exempt from definition

Information Industry Assn
- rely on market forces to determine which services public wants; ESP's should not have to pay into fund

Compuserve
- rely to the maximum extent possible on the marketplace and private sector initiative to achieve universal service objectives
- they are not a telecommunications provider; if, however, they are included, they should be exempted from USF contribution requirements

Cable

Continental
- already provides access to cable services on a universal basis in its franchise areas; have begun offering access to advanced services w/o govt. funding
- agrees core services available at discount; other special services, must be done judiciously; no need for advanced services to be eligible for subsidy: would inflate size of fund requirement and shift moneys from low-cost providers to incumbent LEC's (NYNEX plan would not); where no company provides access, subsidy should be awarded to low bidder in competitive process
- Statute does not require commission to designate any advanced services for universal services support; rather mission is to develop competitively neutral rules to enhance access to services to extent technically feasible and economically reasonable; no subsidy unless determined that advanced services must be universal and existing market mechanisms inadequate
- Continental et al have committed to provide broadband; no need to inflate USF by subsidizing duplicate facilities by carriers
- commitment: to provide Internet access; provide one free cable modem, additional modems at cost, one free connection to their on-line service with dedicated access, unlimited usage; free cable connection to all schools within 200 feet of its cable plant; will provide necessary internal wiring installation at cost or for free if can coordinate with electricians; will provide basic tier service, cable programming and teaching materials
- lots of examples of market at work for advanced services; USF not required to induce provision;

- if subsidy required for advanced, subsidy should be interstate and should be available to all carriers on competitive bid process

National Cable Television Assn
- industry's substantial contribution to education is widely known
- core services should be discounted; also special telcom services should receive universal service support, but don't mandate technologies
- in those areas where cable is already providing access to enhanced services, no need to designate access capacity for universal service support
- discount: methodologies using incremental costs are unwieldy, time-consuming, costly; therefore, use competitive bidding process to assure lowest possible rates in lieu of suggested discounts
- lowest bidder becomes provider with no entitlement to a subsidy
- no need to require access to advanced services since cable is already doing it

Time-Warner:
- issue can not be handled by a NPRM, must be a NOI; all issues and questions are premature to answer

TCI:
- market forces are already working to achieve goals; limit, limit, limit
- must not require all telecommunications carriers to provide full range of subsidized services; Issue: statute provides that carrier is obligated to provide any of its services that are within the definition of universal service at a discount; statute does not give Commission authority to require provision of services not already offered; statute suggests that list of services must be carrier services, i.e., regulated, basic.
- advanced services: should not compel provision to schools, libraries; imposes costs that recovery schemes not suited to provide; unnecessary burden on new market entrants, delaying their ability to compete.
- important to limit, minimize discounts

Education

Secretary Reilly
- concern for equity; make available to schools that are least likely to afford
- beginning to use broadband; suggest broad definition of services

National School Board Association, American Library Assn, NEA, Council of Chief State School Officers, ETS, USDLA, et al
- primary concern is improvement of external connections and internal networks
- all rooms in a school must be connected or outside connections of little use
- must define leading edge standards, tommorrow's de facto; demands for bandwidth will increase
- if a service is commercially available in an area, it should be available to schools and libraries as special service (and discounted)
- special services defined: local, long distance transmission for voice, data; access to info services; covered services include: unbundled broadband switching and transmission capacity for high quality video; high speed broadband circuits to building and internal networks to all classrooms; exclude CPE terminal equipment
- special need students: may need to include terminal eqpt for these needs
- full range of services, schools will decide what is cost-effective and practical; standards should be revised every four years; technologically neutral requirement, schools will select for their conditions

- will be a gradual process: schools must obtain hardware and other infrastructure as well; may not want or need covered services;
- free core services; discount from competitive market prices; floor must be Total Service Long-Run Incremental Cost; additional lifeline subsidy to schools and libraries in poor areas
  - price paid should be lesser of 1.) present day rate or current bid 2.) lowest price charged for similar services to other parties 3.) market-based price discounted to assure affordability
  - prices should be benchmarked based on prices where there is competition; calculate national median price (national median commercial rate may be surrogate); then discount for affordability -- price must be set at rate which permits use by 95% of user community; carriers must show that incremental cost does not exceed discount rate; compensation to carrier is from carrier's TS-LRIC to 95% affordability price
  - service request then put out to bid; winning bid must be lowered to above price or, if price below the national median price, it becomes the price
  - additional lifeline subsidy for poor schools and libraries: rank according to median family income; bottom 25% of all school districts qualify; lifeline discount is proportional to variance from national median income; this subsidy must come out of fed funds
- sharing should not be prohibited as long as primary purpose is educational; should not be prohibited from charging user fees to others in community to defray expenses
- must encourage development of two way interactive video or Internet over dedicated facilities; incent by use of marginal-cost pricing of transport usage to access ISP's; flat rates; also require unbundling

Access to Communications for Education (ACE) Coalition (ISTE et al)
- basic services for education should include frame relay, ATM, IXC access, voice mail, local or 800 Internet access, e-mail, data transmission, optional SS7 and blocking, high speed data and broadband ranging from 128KB to T1, ISDN.
- discounts apply to all available services according to a sliding scale that is in direct proportion according to the use in education. Range should be 100% discount for basic dial tone to 5-10% for most advanced services. However, in all cases, rates must be less than amounts charged to others for similar services. Discounts are established annually based on categorical filings of telcom carriers; must be advertised, posted with FCC
- Commission should not try or presume to dictate what services, functionalities, facilities should be provided at discount; it is imperative that this decision be made by schools, libraries
- incremental cost was considered by Senate and rejected
- harmonizing FCC, states is absolutely essential
- eligible institutions should include consortia supplying distance learning to schools
- Incentives other than discounts and financial support should also be used to stimulate availability of advanced services
  - telcom carriers should be authorized to conduct in-service training on advanced services
  - set aside funds in USF to support R&D and demonstration projects
  - set aside funds in USF for product development grants for technology applications
  - extra incentives for empowerment zones
- advanced services should be included in definition of universal services

US Distance Learning Assn (USDLA)
- free voice grade telephone line provided to each school, library, health care facility at no cost for non-administrative purposes

- advanced telcom services should be provided at substantial discount calculated from the lowest competitive rate negotiated in the state or region
- disadvantaged schools, libraries in disadvantaged communities should be selected for subsidized advanced services on basis of community income levels; select schools, libraries in lowest 20th percentile; emulate Lifeline, Link-Up America plans with subsidy
- should treat vocational-technical training at secondary schools and community colleges as qualifying institutions; also encourage inclusion of distance learning consortia as qualifying
- proposes four sequential phases; first two qualify for essential service treatment as essential to education; second two phases describe additional services which should also be supported by universal service support mechanisms
- Phase One: Immediate Needs
  - at least one classroom in every school and one work station in every library has access to voice grade line for non-administrative, curricular purposes; model is cable -- they provide CATV access voluntarily to schools in most locations
  - access to satellite educational programming for schools, libraries, including access to at least one satellite receive-only antenna with circuitry
- Phase Two: Short Term Needs:
  - digital services and ISDN lines become important; model this phase after Pacific's Education First program
- Phase Three: Two Year Time frame
  - recommends wide scale introduction of high speed T1 services to schools, libraries, health care as contemporary standard for high quality video
- Phase Four: Goals for 2000
  - need broadband digital services to schools, libraries, health care to support multiple digital video platforms delivered at up to 45 MB
- calls FCC attention to training and maintenance needs; will not deliver meaningful services unless addressed
- discounts: users and providers encouraged to use market mechanisms to arrive at discounted rates
  - preferred methodology would be based on incremental costs of providing services
  - however, because of difficulty in determining true costs, it will require calculating discount from lowest competitive rate at state, region level
  - target discount rates are : 45% on lowest competitive telephone rates; 50% discount on fair and reasonable charges for installation of hardware to access services; 50% discount for fair and reasonable charges for ongoing maintenance and upgrades

New York Board of Regents and State Education Department

- lot of activity already in this state with networking, technology, discounts
- they are addressing three primary regulatory policy issues: lower prices; universal access for all educational institutions (NY's vision includes universities, museums, cultural institutions); evolving scalable infrastructure that supports advanced applications; Joint Board should also expand definition of eligible institutions to include their definition
- special services should include voice messaging, modem access to networks, teleconferencng services; must discount access and use of these services
- advanced services: interpretation is that discount is available for installation to permit access, but not use; however, Conference Report seems to indicate subsidies should be established for both special and advanced for both access and use; Joint Board must clarify whether access and possibly use will be subsidized
- current language places too much emphasis on narrow-band services; must have assurance for affordable access and use of advanced services if we are to create an

interconnected interoperable learning community; suggests aggregating market demand to achieve price reductions

- dial-up at 28.8KB is not adequate for instructional settings; need for broadband: applications are growing rapidly
- other services should be made available to schools using voice grade lines, including:
  - toll-free Internet access to an ISP
  - voice messaging, e-mail
  - multiplexing of local loop capabilities
- advanced services that should be considered include:
  - high speed circuits for data transmission, e.g., frame relay, ATM, ADSL, videoconferencing, video on demand, interactive multimedia (voice, data, video), Internet-based activities, CPE for persons with disabilities
- consider using incremental portion of "business' rates for services vs residence rates as an offset to rates charged to schools, libraries
- principle of incremental pricing should prevail when establishing cost basis for providing services via USF; aggregate the market to achieve reduced rates
- mechanisms for price support should be on "bandwidth on demand" and scalable infrastructure; defining services too rigidly could inhibit evolution of network and its services
- state's should have regulatory freedom to set complementary price structures on advanced services that would be consistent with federal discounts on core or special services
- principle of moderation in terms of contributions to USF; gives more incentives to compete; lower rates through more market competition
- Issue: many schools, libraries obtain Internet access from other educational organizations, usually post-secondary, who partition unused capacity; Joint Board must allow this reselling to occur
- need requirement to provide broadband, if requested; companies which only provide core services should be required to provide connectivity to advanced services and ensure capability to interconnect

Washington: Supt of Public Instruction

- single flat rate for basic service at 50% of average business rate; advanced telcommunications services at 75% of average business rate
- core services equal voice grade access, touch-tone, etc.
- also core for education should include frame relay, ATM, IXC access, voice mail, local or 800 Internet access, e-mail, data transmission, optional SS7 and blocking, high speed data and broadband ranging from 56KB to T1, ISDN.

Wisconsin Department of Public Instruction

- dial access via voice grade is short term interim option; need direct dedicated lines
- required services range from 56 KB or ISDN on low end to T1, T3 speeds; higher bandwidth necessary for distance learning
- just adopted rules for partial telcom discounts to schools, libraries; only for new services and will be phased out after three years; Commission should allow discount for current services; no reason to phase out
- set nation-wide base of both services and costs; if states responsible for setting discounts for universal service, it will perpetuate inequities
- special universal services for schools, libraries should be offered at lower of (1) lowest rate offered to any customer or (2) TS-LRIC

Illinois State Board of Education et al

- eligible services for discount: robust, routed asynchronous and synchronous connections for voice, data, video, images to desktop

    - high speed, high bandwidth; dedicated and switched services including frame relay, ATM, with bandwidth from 56KB to OC-3; includes ISDN, T1, T3; must be offered to building level, not regional hub; also dial-up access
    - discounted toll-free 800 services for libraries
- discount: ceiling is long-run marginal cost; discounts and recovery against the ceiling
- Illinois example of Senate bill to discount 56KB, T1; now being implemented
- funding mechanisms: diverse and sustainable, including general revenue funds from state and federal sources; also alternative regulation plans
- importance of partnerships between K-12, libraries, higher ed consortiums; need to stretch Act to include these entities;
- want limited resell capabilities -- recover costs

Alliance for Distance Education in California
- discounts should use same factors as currently use for low income customers; equate schools to low income consumer; discount at 10% below lowest rates offered to its lifeline customers or 20% below lowest contract rates offered to business, whichever rate is lower
- important that colleges, universities have cooperative programs with K-12 and eligible for same rates
- providers which operate in more than one state should contribute to USF

Syracuse University
- says need two-track approach, short-long term
- short term: 1.) need dial-up access availability with no toll 2.) tariffs adjusted to cost plus ROI 3.) provide direct subsidies for high-cost areas
- must encourage Internet access now
- longer term establishes framework after more extensive analysis
- says act is too ambiguous, too many definition problems, particularly telecommunications services vs information services
- concern that we're not addressing internal info infrastructures and training needs

Council of the Great City Schools
- express references to high poverty/central city areas should be incorporated into regulations
- access should be interpreted to include all classrooms, offices within a school rather than just a single point in the building
- all telcom services which hold the promise of improving the knowledge base of instruction should be essential
- should consider discount rates in declining amounts for schools in direct proportion to their ability to pay rates; proxy for ability to pay would be the rate of poverty in the school district
- need permanent advisory board

Oakland School District
- wants discounts on all services utilized by schools: access to public switched network; switching; features: provides complete list of services
- USF support should also apply to advanced; ISP's should also be included as telcom carriers
- discounts include: all universal services at residential prices, flat rates, no usage; eliminate inter-office facility charges; bulk rate for voice-processing services
- discounts on advanced includes: eliminate inter-office facility charges; bulk rate for numbers of same type services; permanent retention (grandfather) of "give-aways (Pac Tel's Education First program); T1 access at 128KB price

Mendocino CA School District

- small rural district with exceptional technology platform; also operate as ISP for 750 dial-up subscribers
- LANs a necessity for each student, teacher for Internet access
- bandwidth for universal service must allow for multimedia, video for many simultaneous users
- provide services at flat rate
- shared bandwidth should not be hindered, it should be encouraged
- need to set up home access systems; need special exemption for schools implementing dial-up; accounts need to be free or sold on a cost recovery basis to parents, students, teachers for educational purposes

Merit (MichNet)

- voice-grade access must support 28.8KB modem access
- widest possible range of services: Internet access, two way interactive video, ISDN, T1, LAN access; define as service areas, allow schools to define the technology
- wants sharing of capacity with ineligible parties
- ISP's should not make support payments because the telcom carriers (who own the ISP facilities) have already paid; however, ISP's can draw reimbursements from the fund

Apple Computer

- seeks equity of access; wants broad flexible definition of services, evolve over time, schools should define mix that they need; also ask for network sharing to minimize costs
- universal services should include high bit rate connection from school to telcom infrastructure; full range of digital services with bandwidths ranging from 128K to 45Mb; fixed and mobile digital services; dedicated and dial-up facilities
- telcom and CPE should be unbundled
- focus on facilities required to provide functionalities (list included)
- keep it simple, no school resources for complex rules
- Telecommunications Development Fund: promote software, programming, etc.

American Association of Community Colleges

- wants to include community colleges as beneficiaries of universal service support; many of their services are K-12 types of services
- define core services eligible for discount as Internet access, data transmission capability, optional SS7 features/blocking, enhanced services, broadband
- says fiber at discounted rates should be made available to support K-12 / community college distance learning
- resale prohibition should not bar sharing with non-eligible entities

Educom

- FCC and states must act now to create scalable digital transport foundation; in public interest and will create private investment in products and services
- Four general priorities for changes to universal service
  - fix the problems with the present system before burdening it with new requirements; e.g., education pays business rates for telephone service
  - reduce or eliminate barriers to carrier voluntary support for universal service goals; e.g., gifts, grants, service discounts to education
  - create incentive for full digitization of public switched network: need to incent broadband in last mile
  - reduce the current bias in universal service in favor of conventional telephone switches and their associated services; as range of technologies broadens, universal service should subsidize needed services independently